NATIONAL CANCER INSTITUTE

MOUSETRACKS

May, 2001

ANNOUNCING THE ARRIVAL OF TWINS

Two new websites, the MMHCC public and its private site counterpart, emice, went online Wednesday, April 4, 2001. The URL for the public site is: http://mmhcc.nci.nih.gov The URL for the private site is: http://emice.nci.nih.gov User/passwords are necessary for accessing emice and its associated discussion group, TWiki.

These websites are living sites; living, in that we will be updating them frequently, based on input from users and contributors. Please take some time to look at these websites and send feedback, new content and any changes to Betty Tarnowski (tarnowsb@mail.nih.gov).

BABY DePINHO HAS ARRIVED

Alexis Kay DePinho arrived April 7, 8 lbs. 2 oz., 19.5 in. and is as beautiful as Mom, Lynda Chin! They are doing really well and Dad is in heaven. Lynda will be place pictures on a web site.

…from Ron "papa" DePinho

INSIDE THIS ISSUE

MMHCC
Mouse Models of Human Cancers Consortium

AFFYMETRIX'S MOUSE PROBLEM

Affymetrix (Santa Clara, CA), a leading maker of DNA arrays, has a problem: Some of its arrays have contaminated, scrambled mouse-DNA data. Affymetrix first disclosed the scrambled mouse DNA problem in a March 7, 2001 notice to U.S. SEC. Affymetrix used information from a public database maintained by the NCBI to assemble the mouse chips. Affymetrix informed the SEC it was having trouble "because of the rapidly evolving nature of the public domain sequence databases" and that "sequence errors may not be found prior to the commercial release of a product."

Affymetrix's Vice President of Corporate Development, Rob Lipschutz, said the glitch occurred when Affymetrix employees processed the data. The mixups involved the Unigene U74 collection of mouse genes and expressed sequence tags (ESTs). When the company researchers began to annotate genes and ESTs that had already been placed on *Continued on page 2.*

CALENDAR OF EVENTS

May 3-4, 2001
Bethesda
Pre-Clinical Trials Standing Committee (Validation)
Vicky Richon/Kevin Shannon
Wendy Patterson, IG
Mary Wolpert, Steering

May 15-17, 2001
Bar Harbor
Technologies Standing Committee
Raju Kucherlapati
Dan Gallahan, IG

May 24-25, 2001
Nashville
Gastrointestinal Organ Site Committee (Pancreas)
Bob Coffey, Steve Leach
Susan McCarthy, IG

June 12-16, 2001
Madison
Genetic Modifiers
Joanna Groden
Carol Kasten-Sportes, IG

June 20-22, 2001
Boston
Lung Organ Site Committee
Tyler Jacks, David Tuveson
Harold Seifried, IG

July 9-12, 2001
San Francisco
MMHCC Steering Committee Meeting

July 19-20, 2001
Westfields
Breast Cancer Think Tank
Jeff Green, Eva Lee, Dan Medina
Colette Freeman, IG

September 9-11, 2001
Rockville
High Resolution Meeting *****
Sponsor: NCI Biomedical Imaging Program
John Hoffman, Barbara Croft, Steering
* for meeting information, see:
http://www.ornl.gov/HiRes2001/

October 18-21, 2001
Bar Harbor
Prostate Workshop
Charles Sawyers
Suresh Mohla, IG

Affymetrix, *continued from page 1.*

chips, they discovered that though most appeared to be reproduced correctly, some were reversed.

A company review found that three chips (A, B, C) in the U74 set had problems. "A" chip was the least affected with about 75% of the sequence being usable. "B" chip also had 75% usable sequences. "C" chip was 60% defective and therefore unusable.

Affymetrix plans to have replacement chips ready in "weeks". Replacing the scrambled chips could cost the company up to $4 million.

The company also plans to put the entire mouse genome sequence on chips, after the public-private consortium completes assembling the data. This consortium has placed more than 8 million bases of raw mouse genomic data in NCBI and other public repositories to date. Mouse researchers say the information is highly fragmented and difficult to use.

…excerpts from Science, vol 291, 30 March 2001

KYOTO ENCYCLOPEDIA OF GENES AND GENOMES

This interesting informatics project is supported by the Japanese government to computerize and integrate large databases (a pathway database of interacting molecules and genes, a ligand database of cellular components, and a gene database from 50 organisms). The information is presented pictorially in pathway maps, genome maps, and catalogs that group genes by organism and function. You can check it out at: http://www.genome.ad.jp/kegg/
…from Paul Okano, DCB, NCI

MUSIC and SCIENCE

"Muzak" piped into a NYC intensive care unit is thought to have lowered the mortality rate 8% below the national average. *See page 3 for commentary.*

MUSIC and SCIENCE

Lullabies in a neonatal nursery might help premature infants gain weight and have earlier discharges. Has music therapy been tried for cancer patients?

The “infusion room” at Advocate Illinois Masonic Medicine Center uses music to ease the anxiety and pain of cancer patients. Some psychologists think the sound of music evokes conditioned relaxation, just as the sound of a dentist’s drill evokes conditioned nervousness. Some scientists have discovered that levels of stress hormones can drop while listening to music; some physiologists believe that music coaxes the body to release endorphins.

Skeptics say music therapy is a mere distraction technique. Scientists cite the “gate control” theory of pain: only a limited number of neural pathways can transmit pain impulses. Overload these pathways with music and there will be fewer left to respond to pain.

There are now 3,327 certified music therapists, nationwide. “Music is medicine.” *…excerpts from the New York Times, Feb. 13, 2001*

BLOOD THINNER CURBS CANCER SPREAD in MICE

Scientists at UCSD have evidence that heparin, a blood-thinning drug, limits the ability of certain cancers in mice to metastasize by interfering with the ability of cancer cells to travel through the bloodstream. These data were published in the March 13, 2001 issue of PNAS.

Heparin has been around for a long time. Animal studies in the 1960s and 1970s showed that heparin inhibited the spread of cancer. Follow up human studies focused on the use of anticoagulants like Coumadin which did not show the same effect; the research stalled.

Dr. Ajit Vbarki, noted “we have been studying heparin’s ability to prevent certain cell interactions which we discovered are involved in the spread of cancer cells.” Experimental mice received a single dose of heparin, which lasted only a few hours. Yet this early exposure resulted in a markedly reduced cancer cell survival and metastasis when the mice were examined several weeks later. Lubor Borsig, a postdoctoral fellow in Varki’s lab stated “our findings show that the anti-metastatic effect of heparin is not due to its ability to prevent blood clotting, but rather its blockage of early tumor-platelet interactions.”

Heparin, not yet been proven effective for cancer in humans, could be a treatment for patients with cancers of the colon, pancreas, lung, or other types that do not normally live in the bloodstream. Borsig further commented “blood is a hostile environment for these types of cancer. Tumor cells can be attacked unless they are able to cloak themselves with platelets. We think heparin blocks the formation of this cloak.”
…excerpts from The New York Times, March 13, 2001

IMPLEMENTATION GROUP MEMBERS

Organ Site Committees

Breast Cancer Models - Colette Freeman

CNS Cancer Models - Iqbal Ali, Judy Mietz

Gastrointestinal Cancer Models - Susan McCarthy

Hematopoietic Cancer Models - Allan Mufson

Lung Cancer Models - Harold Seifried

Ovarian Cancer Models - Jane Fountain

Prostrate Cancer Models - Suresh Mohla

Skin Cancer and Melanoma Models - Jaye Viner

Standing Committees

Genetic Modifier Tools - Carol Kasten-Sportes

Infrastructure - Kenneth Buetow, Jules Berman

Mouse Engineering - Daniel Gallahan

Pathology and Lab Medicine - Barbara Conley

Pre-clinical Trials - Wendy Patterson, Kathleen Sybert

Technologies - Jennifer Couch

STEERING COMMITTEE MEMBERS

Barbara Croft

Jorge Gomez

James Hanson

John Hoffman

Jim Jacobson

Ronald Lubet

Mary Wolpert

MINUTES FROM THE IMPLEMENTATION and STEERING GROUP MEETING
April 3, 2001

Attendees: K. Buetow, J. Couch, B. Croft, C. Freeman, D. Gallahan, J. Hanson, J. Hoffman, C. Kasten-Sportes, R. Lubet, S. McCarthy, J. Mietz, S. Mohla, A. Mufson, W. Patterson, H. Seifried, S. Seweryniak, B. Tarnowski, J. Viner, M. Wolpert

Announcement: Two new MMMHCC websites will be live Wednesday, April 4, 2001. The URL for the public site is: http://mmhcc.nci.nih.gov; the private site's URL is http://emice.nci.nih.gov. These sites are living sites, in that they will be continually updated with new content and corrections.

Discussion Topics:

1. Web sites (Ken Buetow):

- The Oversight Committee (formed to review website content) can possibly serve in an advisory capacity for scientific content to Ken Buetow.
- User/passwords will be emailed to each Principal Investigator and Co-Investigator for the private emice web site.
- If any IG members have forgotten their passwords or have any problems accessing the emice web site, please let Betty know.
- Please stress the importance of electronic capture of data, particularly histology/pathology images, at committee workshops and at the Steering Committee meetings. Electronic capture enables posting on the MMHCC websites (after authorization to share the data is obtained). IG Members should advise the committee chairs about electronic capture possibilities for meeting planning and for meeting summaries.

2. Upcoming Meetings:

- Prostate Pathology Pre-Meeting, Vanderbilt University, Nashville, April 17-19, 2001. The goal of the meeting is to pick demonstration pathology slides to be shown and discussed at the full Prostate Meeting at Jackson Laboratories, Bar Harbor, October 18-21, 2001. Suresh Mohla stated that 6 pathologists will be this pre-meeting with Scott Shappel as the chair. Suresh will address the electronic capture processes with Scott.

- The Pre-clinical Trials/Pharma Meeting, Four Points by Sheraton, Bethesda, May 3-4, 2001. Wendy Patterson described the focus of this meeting as the validation of murine cancer models in therapeutic pre-clinical trials. A meeting summary and many of the presentations will be captured electronically. We are expecting a sizable participation by the Pharmas with emphasis on scientific Pharma representatives versus the patent types that attended the first Pharma meeting.

- Micro Array Technology Workshop, Jackson Laboratories, Bar Harbor, May 15-17, 2001. Dan Gallahan (NCI – IG staff organizer) reported that the workshop agenda is in hand; each participant will pay their own expenses (approximately $1,500); Agilent Technologies (Rosetta software license), Axon (scanner), Gene Spring and Genomics will be represented

at the workshop. MMHCC organizers are Raju Kucherlapati and Jeff Green. Eighteen students and six instructors are expected to participate.

- Pancreatic Symposium, Vanderbilt University, Nashville, May 24-25, 2001. Susan McCarthy, IG member, handed out meeting brochures for the Pancreatic Symposium in Nashville. A well-organized meeting is expected; Dr. Coffey and his office are handling all the arrangements. There are 20 speakers confirmed which the MMHCC will support.

- Lung Workshop, Boston, June 20-22, 2001. Harry Siefried announced that the Lung "Annapoloid" meeting is looking more promising. They now have 7 or 8 top pathologists thanks to Alexander Nikitin (pathologist).

- Hi Res Meeting, Rockville, September 9-11, 2001. Mary Wolpert briefly outlined the meeting. Please see the website http://www.ornal.gov/HiRes2001/ for more information.

4.Mary Wolpert mentioned the massive recall by Affymetrix for faulty DNA arrays. Does this affect any MMHCC members? What impact, if any, would this have on mouse research? (*See Science, 30 March 2001, p.2533 for details*.)

5.Proposed Strategic Planning. Dinah Singer has tasked the IG to undertake assessing and strategic planning for MMHCC's next three years. An evaluation of the MMHCC's first two years may help answer the questions: what and how has the MMHCC contributed to our understanding of cancer? It is difficult to assess what the19 PIs would have accomplished if the Consortium didn't exist. In general, the IG members agreed that a facilitator would be beneficial for the processes.

Action Item: IG members would like the following materials for the assessment/strategic planning task:

- For each U01 grant, copies of the face page, abstract, and progress reports
- The original RFA

6. Next meeting, Tuesday, May 1, 2:00 pm, EPN-E

Implementation Group and Steering Committee Meeting
Tuesday, May 1, 2001
2:00 pm, EPN-C

AGENDA

1. Minutes from April 3, 2001 meeting

2. Strategic Thinking - Dr. Dinah Singer

3. Discussion about the Strategic Thinking process

4. Website Updates

5. Upcoming meetings

6. Other business

7. Date of next meeting: June 5, 2001

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